

CLAIMS

- 5 1. A method for preventing or treating a skin condition, disorder or disease
that is responsive to resveratrol, comprising administering to the susceptible or
affected area of the individual's skin a therapeutically effective amount of a topical
pharmaceutical formulation that comprises a topical carrier and an active agent
selected from the group consisting of resveratrol, pharmacologically acceptable
salts, esters, amides, prodrugs and analogs thereof, and combinations of any of the
foregoing.
- 10 2. The method of claim 1, wherein the active agent is *cis*-resveratrol or a
pharmacologically acceptable salt, ester, amide, prodrug or analog thereof.
- 15 3. The method of claim 2, wherein the active agent is *cis*-resveratrol.
- 20 4. The method of claim 2, wherein the active agent is a conjugate of *cis*-
resveratrol and a mono- or di-saccharide.
- 25 5. The method of claim 4, wherein the active agent is *cis*-resveratrol
glucoside.
6. The method of claim 1, wherein the active agent is *trans*-resveratrol or a
pharmacologically acceptable salt, ester, amide, prodrug or analog thereof.
7. The method of claim 6, wherein the active agent is *trans*-resveratrol.

8. The method of claim 6, wherein the active agent is a conjugate of *trans*-resveratrol and a mono- or di-saccharide.

5 9. The method of claim 8, wherein the active agent is *trans*-resveratrol glucoside.

10 10. The method of claim 1, wherein the active agent comprises a mixture of *cis*-resveratrol and *trans*-resveratrol.

10 11. The method of claim 1, wherein the topical pharmaceutical formulation comprises an ointment, lotion, cream, emulsion, microemulsion, gel or solution.

15 12. The method of claim 1, wherein the topical pharmaceutical formulation contains approximately 0.25 wt.% to 75 wt.% active agent.

15 13. The method of claim 12, wherein the topical pharmaceutical formulation contains approximately 0.25 wt.% to 30 wt.% active agent.

20 14. The method of claim 13, wherein the topical pharmaceutical formulation contains approximately 0.5 wt.% to 15 wt.% active agent.

25 15. The method of claim 14, wherein the topical pharmaceutical formulation contains approximately 1.0 wt.% to 10 wt.% active agent.

25 16. The method of claim 1, wherein the topical pharmaceutical formulation is administered at least once daily.

17. The method of claim 16, wherein the topical pharmaceutical formulation is administered one to four times daily.

5 18. The method of claim 1, wherein the skin condition, disorder or disease is associated with inflammation.

10 19. The method of claim 18, wherein the skin condition, disorder or disease is psoriasis, contact dermatitis, atopic dermatitis, actinic keratosis, a keratinization disorder, an epidermolysis bullosa disease, exfoliative dermatitis, seborrheic

dermatitis, erythema multiforme, erythema nodosum, discoid lupus erythematosus, dermatomyositis or skin cancer.

15 20. The method of claim 1, wherein the skin condition, disorder or disease is skin damage caused by the sun or other light sources.

21. The method of claim 1, wherein the skin condition, disorder or disease comprises the effects of natural aging on an individual's skin.

20 22. A method for preventing or treating a skin condition, disorder or disease that is responsive to treatment with resveratrol, comprising administering to a susceptible or affected individual a pharmaceutical formulation comprised of a microemulsion containing a therapeutically effective amount of an active agent selected from the group consisting of resveratrol, pharmacologically acceptable salts, esters, amides, prodrugs and analogs thereof, and combinations of any of the foregoing.

25 23. The method of claim 22, wherein the active agent is *cis*-resveratrol or a pharmacologically acceptable salt, ester, amide, prodrug or analog thereof.

24. The method of claim 23, wherein the active agent is *cis*-resveratrol.

25. The method of claim 23, wherein the active agent is a conjugate of *cis*-resveratrol and a mono- or di-saccharide.

26. The method of claim 25, wherein the active agent is *cis*-resveratrol glucoside.

27. The method of claim 22, wherein the active agent is *trans*-resveratrol or a pharmacologically acceptable salt, ester, amide, prodrug or analog thereof.

28. The method of claim 27, wherein the active agent is *trans*-resveratrol.

29. The method of claim 27, wherein the active agent is a conjugate of *trans*-resveratrol and a mono- or di-saccharide.

30. The method of claim 29, wherein the active agent is *trans*-resveratrol glucoside.

31. The method of claim 22, wherein the active agent comprises a mixture of *cis*-resveratrol and *trans*-resveratrol.

32. The method of claim 22, wherein the formulation comprises approximately 0.25 wt.% to 75 wt.% active agent.

33. The method of claim 32, wherein the formulation comprises approximately 0.25 wt.% to 30 wt.% active agent.

34. The method of claim 33, wherein the formulation comprises approximately 0.5 wt.% to 15 wt.% active agent.
- 5 35. The method of claim 34, wherein formulation comprises approximately 1.0 wt.% to 10 wt.% active agent.
- 10 36. The method of claim 22, wherein the topical pharmaceutical formulation is administered at least once daily.
- 15 37. The method of claim 36, wherein the topical pharmaceutical formulation is administered one to four times daily.
- 20 38. The method of claim 22, wherein the formulation is administered orally.
- 15 39. The method of claim 22, wherein the formulation is administered parenterally.
- 20 40. The method of claim 22, wherein the formulation is administered at least once daily.
- 25 41. The method of claim 40, wherein the formulation is administered one to four times daily.
- 25 42. A topical pharmaceutical formulation for use in preventing or treating skin conditions, disorders and diseases associated with inflammation, comprising a topical carrier and a therapeutically effective concentration of an active agent selected from the group consisting of resveratrol, pharmacologically acceptable

salts, esters, amides, prodrugs and analogs thereof, and combinations of any of the foregoing.

43. The formulation of claim 42, wherein the active agent is *cis*-resveratrol
5 or a pharmacologically acceptable salt, ester, amide, prodrug or analog thereof.

44. The formulation of claim 43, wherein the active agent is *cis*-resveratrol.

10 45. The formulation of claim 43, wherein the active agent is a conjugate of
cis-resveratrol and a mono- or di-saccharide.

15 46. The formulation of claim 45, wherein the active agent is *cis*-resveratrol
glucoside.

20 47. The formulation of claim 42, wherein the active agent is *trans*-
resveratrol or a pharmacologically acceptable salt, ester, amide, prodrug or analog
thereof.

25 48. The formulation of claim 47, wherein the active agent is *trans*-
resveratrol.

49. The formulation of claim 48, wherein the active agent is a conjugate of
trans-resveratrol and a mono- or di-saccharide.

50. The formulation of claim 49, wherein the active agent is *trans*-
resveratrol glucoside.

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51. The formulation of claim 42, wherein the active agent comprises a mixture of *cis*-resveratrol and *trans*-resveratrol.
5. 52. The formulation of claim 42, wherein the topical carrier comprises an ointment base and the formulation is an ointment.
53. The formulation of claim 42, wherein the topical carrier comprises a cream base and the formulation is a cream.
- 10 56. The formulation of claim 42, wherein the topical carrier comprises a lotion base and the formulation is a lotion.
- 15 57. The formulation of claim 42, wherein the topical carrier comprises a gel base and the formulation is a gel.
58. The formulation of claim 42, wherein the topical carrier comprises an aqueous liquid and the formulation is a solution.
59. The formulation of claim 42, comprising a microemulsion.
- 20 60. The formulation of claim 42, comprising approximately 0.25 wt.% to 75 wt.% active agent.
61. The formulation of claim 60, comprising approximately 0.25 wt.% to 30 wt.% active agent.
- 25 62. The formulation of claim 61, comprising approximately 0.5 wt.% to 15 wt.% active agent.

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63. The formulation of claim 62, comprising approximately 1.0 wt.% to 10 wt.% active agent.

64. A pharmaceutical formulation comprising:

5 approximately 0.25 wt.% to 30 wt.% of an active agent selected from the group consisting of resveratrol, pharmacologically acceptable salts, esters, amides, prodrugs and analogs thereof, and combinations of any of the foregoing;

 approximately 2 wt.% to 20 wt.% emulsifiers;

10 approximately 2 wt.% to 20 wt.% emollient;

 approximately 2 wt.% to 50 wt.% solubilizer;

 approximately 0.1 wt.% to 0.2 wt.% preservative; and

 water.

15 65. The formulation of claim 64, wherein the emulsifiers are selected from the group consisting of glyceryl monostearate, polyoxyethylene stearate, polyethylene glycol, ethylene glycol palmitostearate, caprylic/capric triglycerides, oleoyl macrogolglycerides, and combinations thereof.

20 66. The formulation of claim 64, wherein the emollient is selected from the group consisting of propylene glycol, glycerol, isopropyl myristate, PPG-2 ether propionate, and combinations thereof.

25 67. The formulation of claim 64, wherein the solubilizer is selected from the group consisting of diethylene glycol monoethyl ether, diethylene glycol monomethyl ether, diethylene glycol monoethyl ether oleate, polyethylene glycol, polyethylene castor oil derivatives, PEG-8 caprylic/capric glycerides, alkyl methyl sulfoxides, pyrrolidones and dimethyl acetamide.

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